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RELATIONSHIP OF EGO IDENTITY TO PSYCHOSOCIAL EFFECTIVENESS[1,2]

JOHN E. RASMUSSEN

Naval Medical Research Institute

Summary.—This study was designed to examine systematically the relationship of Erikson's concept of ego identity to psychosocial effectiveness as actually demonstrated in daily living. Two groups of Navy recruits, one composed of individuals making a highly adequate psychosocial adjustment and the second containing persons demonstrating minimally adequate adjustment, served as *Ss*. Highly significant differences were obtained on an operational measure of ego identity. Evidence of construct validity was adduced in terms of the predicted relationship of ego identity and a self-concept measure as well as through intercorrelation of subscores on the ego identity instrument. The results lend support both to the value of Erikson's theory in the systematic study of personality and his position that an adequate ego identity is necessary for a person to cope effectively with his social and cultural environment.

Within recent years, increasing attention has been given to the theoretical formulation of "healthy" personality development and the concept of ego identity which have been evolved by E. H. Erikson. The development of his theory may be found in several writings (1946, 1950a, 1950b, 1956); the most recent summary presentation of his theory as it pertains to the healthy personality appears in a monograph entitled, *Identity and the Life Cycle* (1959). In essence, Erikson has extended classical psychoanalytic theory systematically to include sociological and cultural factors in the development of personality. The present investigation is based upon Erikson's proposal that a successfully developed ego identity is necessary for a person to cope effectively with his social environment; ego diffusion will cause a person to fail to make a successful psychosocial adjustment and to meet the demands made upon him by the culture in which he lives.

For Erikson, personality development occurs in eight successive stages which are the product of physiological growth, or more highly differentiated individual capacities, and an expanding interpersonal or social radius. Each step in the expansion of the social radius makes increasing demands upon the individual and contributes to his subsequent psychosocial effectiveness. As the individual first enters and begins to cope with each of the successive psychosocial stages, his ego becomes more vulnerable because of the challenges and resultant conflicts en-

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gendered by dealing with the new demands which are made upon him. The radical changes in perspective necessary for coping with each successive step, coupled with the new challenges and conflicts of the period, represent a psychosocial crisis. The healthy adult personality is predicated upon the successful resolution of eight specific crises which are labeled as follows: I Infancy, II Early Childhood, III Play Age, IV School Age, V Adolescence, VI Early Adult, VII Adulthood, VIII Mature Age.

For each crisis period, Erikson has set forth a criterion of relative psychosocial health and a corresponding criterion of relative ill-health. He relates the psychosocial crises of earlier life to subsequent personality development and function by postulating specific derivatives which are deduced from the criteria of relative health or ill-health for each of the periods. These derivatives, in the form of attitudes or behavior response sets of the individual, become integrated to make up the adult personality.

Adolescence, which is the focus of the fifth crisis, is seen as a highly crucial period in psychosocial development. The criterion of psychosocial health which accompanies satisfactory solution of the adolescent crisis is the development of a sound ego identity; the criterion of ill-health for this period is ego diffusion. Positive resolution of the ego identity crisis is considered necessary for the individual to make a satisfactory adjustment as an adult in his society.

Erikson does not precisely define ego identity but he used the term descriptively to mean a Gestalt-like integration of the ego and self. Moreover, ego identity is seen by Erikson as encompassing much of what has been subsumed by others under various concepts of self, such as the self-concept of Mead (1934), the self-system of Sullivan (1953), etc. It may be premature to attempt to define the exact relationship of the self-aspect and the ego aspect, in view of our present inability to agree on a definition of ego.

Generally speaking, there are several aspects of Erikson's theory which make it particularly amenable to investigation. As he sets forth the derivatives of the criteria of psychosocial health and ill-health for each crisis period in specific behavioral terms, it is possible to study systematically the resolution of the earlier crisis periods through presently-manifested attitudes and behavior rather than by attempting to reconstruct the individual's actual psychological relationships to significant persons in his environment from infancy through adolescence. The theory also lends itself to operational definitions inasmuch as it deals with the developmental relationship of the individual to those about him as opposed to the classical analytic theories of personality which are more intra-psychic in nature. Finally, this theory ties together in an orderly sequential fashion, the important biosocial phenomena of personal development, whereas other theories such as those of Murphy (1947), Sullivan (1953), or Cameron (Cameron & Magaret, 1951), lack this longitudinal integration of developmental problems.

In spite of the increasing frequency with which Erikson's work is mentioned

in the literature, little systematic research on his theoretical formulation has been published. Both Bronson (1959) and Gruen (1960) have given some clear-cut experimental support to the ego identity-diffusion continuum of Erikson's theory. However, there has been no study to date which attempts to relate the concept of ego identity to effectiveness of psychosocial functioning as actually demonstrated in daily living. The present research is intended to be a beginning effort in that direction.

First, it is hypothesized that individuals who demonstrate differences in their ability to effect an adequate psychosocial adjustment also will demonstrate differences in ego identity. The differences will be in the nature of greater ego identity being found in those individuals with a more adequate psychosocial adjustment. Secondly, it is hypothesized that: individuals presenting evidence of an adequate ego identity also will show evidence of significantly greater advance in the solution of the psychosocial crisis of early adulthood, in terms of healthy or positive derivatives of the psychosocial conflicts of that period, than will persons manifesting evidence of ego diffusion.

A further approach to the concept of ego identity and its construct validity is made in terms of the relationship between self-concept and ego identity. Thus, as the third hypothesis, it is predicted that: individuals presenting evidence of satisfactory ego identity will demonstrate a greater degree of self-acceptance than will persons manifesting ego diffusion.

METHOD

Situation Studied

Erikson states that acute identity diffusion usually becomes manifest when the individual is exposed to a combination of physical intimacy, competition, definitive occupational choice, and self-definition. One of the few environmental situations in which all of these psychosocial stresses are provided is in military recruit training.

Data for the present study were collected at the U. S. Naval Training Center, San Diego, California. Upon arrival at the training center, the men are randomly placed in companies numbering approximately 70 men, which remain intact throughout the 9-wk. training period. The training program is highly structured and quite intensive in nature. There is considerable emphasis both on academic material and upon developing a team concept in group interaction. Leadership is provided both by a senior noncommissioned officer and by a peer group of recruit petty officers. Two groups of *Ss* were selected from the recruit population. One group was composed of recruits making a highly adequate psychosocial adjustment to training; the second contained individuals who demonstrated a minimally adequate adjustment.

Instruments

Ego Identity Scale (EIS).—This instrument was devised as a technique for

investigating Erikson's concept of ego identity. Three derivatives of the criteria of health and ill-health, specifically set forth by Erikson in his writing, were selected for each of the first six psychosocial crisis stages. The scale consists of 72 statements or items reflecting these stages. Thus, each derivative is sampled by four items. In order to avoid response set, half of the items were cast so as to require a positive response, and the remaining half were cast so as to elicit a negative response. Location of the items in the scale was randomized. *Ss* responded to the items in terms of general agreement or disagreement. A total ego identity score was obtained as well as a score for each of the six psychosocial crisis stages.

In selecting items, an effort was made to ensure that each statement reflected Erikson's derivatives in a concrete or literal manner. In this way it was hoped to base the scale items as closely as possible on Erikson's theoretical formulations rather than the investigator's interpretation of his writing. A total of 144 statements or items were prepared, with half of the items being used in the final form. As a first step in preparing the statements, a large number of paper and pencil personality tests were examined with a view to selecting those items which specifically reflected Erikson's psychosocial crisis derivatives. However, only eight items were obtained by this procedure. The remaining 136 items were devised for this scale. Each statement reflected a specific attitude or reported behavioral response which was directly related to one of the psychosocial crisis derivatives. The nature of most of the statements is such that the "correct" or socially desirable response was not readily apparent without reference to Erikson's theory.

An example of one derivative and statements reflecting this derivative from each of the six crisis areas is as follows:

Crisis Stage: I. Infancy (Basic Trust vs Mistrust)
Derivative (Healthy): Sense of time perspective, i.e., future satisfaction is sufficiently predictable to be worth working and waiting for.
Positive Statement: If a person wants something worthwhile, he should be willing to wait for it.
Negative Statement: *I lose interest in things if I have to wait too long to get them.*

Crisis Stage: II. Early Childhood (Autonomy vs Shame, Doubt)
Derivative (Unhealthy): A fear of being shamed or publicly exposed to peers and leaders.
Positive Statement: *It doesn't worry me if I make a mistake in front of my friends.*
Negative Statement: It is better to say nothing in public than to take a chance on other people hearing you make a mistake.

Crisis Stage: III. Play Age (Initiative vs Guilt)
Derivative (Healthy): Emotionally comfortable role experimentation in adolescent subsocieties, where discipline and boundaries are provided by the group.
Positive Statement: A person who hasn't been a member of a well organized group or club at some time in his teens has missed a lot.
Negative Statement: During the past few years I have taken little or no part in clubs, organized group activity, or sports.

Crisis Stage: IV. School Age (Industry vs Inferiority)
Derivative (Healthy): The individual anticipates achievement in work endeavors, which are a source of pleasure and recognition.

Positive Statement: I like to tackle a tough job as it gives me a lot of satisfaction to finish it.

Negative Statement: When it comes to working, I never do anything I can get out of.

Crisis Stage: V. Adolescence (Ego Identity vs Ego Diffusion)

Derivative (Healthy): Sense of psychosocial well-being; being at home in one's body.

Positive Statement: It is very seldom that I find myself wishing I had a different face or body.

Negative Statement: I would get along better in life if I were better looking.

Crisis Stage: VI. Early Adulthood (Intimacy vs Isolation)

Derivative (Healthy): The individual seeks and is comfortable in emotionally close relationships.

Positive Statement: Being without close friends is worse than having enemies.

Negative Statement: A person is a lot happier if he doesn't get too close to others.

The criteria for the satisfactory and unsatisfactory resolution of the various psychosocial crisis conflicts are explicitly set forth by Erikson in terms of the individual's relationship to those about him and to society. Thus, the content validity of the statements presented no particular problem. However, in order to rule out any possible ambiguity in wording, and to control possible interpretative biases in developing the items, the statements were subjected to the test of being unanimously agreed upon by two judges as meeting the criteria for which they were written, i.e., the stage of psychosocial development and the specific derivative within the given stage.[3]

Two preliminary forms of the scale, each containing 72 items, were devised for pre-testing and administered to two groups of recruits.[4] An item analysis then was made with a view to eliminating those which did not discriminate or were otherwise weak. The reliability of the final form of the EIS, using the Spearman-Brown prophecy formula (Guilford, 1950), on two samples of new recruits, yielded correlation coefficients of .849 and .851.

Adjective Check List (ACL).—The self-acceptance scale from the adjective check list developed by Gough (1950) was used in this investigation as a means of investigating the concept of ego identity in terms of construct validity.

The self-acceptance scale for Gough's check list was developed by having 30 judges rate each of the 284 adjectives in terms of its "favorability." The 25% of the adjectives rated as most favorable by the judges were selected for the favorability key. The key is comprised of 71 words from the total list. Using this key, the following formula was developed:

$$\text{Index of Self-Acceptance} = \frac{\text{Number of favorable adjectives}}{\text{Total adjectives checked}}$$

Higher scores on this scale were considered to be indicative of a relatively more favorable self-conception.

[3]The judges for this part of the study were E. Broomhead and I. Raifman.

[4]A copy of the Ego Identity Scale has been filed with the ADI Auxiliary Publications Project, Photoduplication Service, Library of Congress, Washington 25, D. C. Order Document No. 8112, remitting $1.25 for photocopies or 35-mm. microfilm.

Peer nomination form.—This instrument was selected as a technique for evaluating adequacy of psychosocial adjustment in recruit training. The sociometric device consists of seven pairs of items which sample a wide range of psychosocial attributes, including military, group, interpersonal, and intra-personal effectiveness in the recruit situation. This particular peer nomination form has been used extensively in studying the sociometric status and attitude characteristics of Navy and Marine Corps recruits. Developmental work on the form was reported by Wilkins, *et al.* (1958). Further refinement of the form was described by Rigby and Ossorio (1959). This form reportedly measures a different set of variables from academic marks in training; and, in terms of over-all success in training, is highly discriminative between recruits independently rated as being in the top and bottom quarters of their company.

Procedure and Ss

All recruits ($N = 1400$) in the 19 consecutive companies used in the study were administered the EIS and the ACL shortly after their arrival at the Naval Training Center and prior to the start of the formal training program. No time limit was imposed upon the recruits, a 10-min. rest period was given between the two instruments.

The EIS and the ACL were administered at the beginning rather than the completion of training, inasmuch as it was considered quite possible that the training experience might be sufficiently disturbing to distort the responses of the marginal group on the experimental instruments. The peer nomination form was administered during the fifth week of training to the 19 recruit companies. Thus, the members of the companies had sufficient time to define their roles in training and become acquainted with their peers.

The three men in each of 19 consecutive recruit companies with the highest scores on the peer nomination form were selected for Group A. While a total of 57 *Ss* were selected through this procedure, test data could not be obtained on one man. Thus, the final number of *Ss* was reduced to 56. The three recruits in the same 19 companies with the lowest peer nomination scores were selected for Group B. Of the 57 men so nominated, 51 were used as *Ss*. Complete test data could not be obtained on one man, and two of the recruits were lost by being set back in training. The other three men were discharged from the service. Variables such as age, education, and nature of the family group are most likely reflected in ego identity; hence, no attempt was made to hold them constant.

Table 1 presents the Median Age, Education, and General Classification Test (general intelligence level) scores for the two groups of *Ss*. The median age for *Ss* in Group A was approximately 2 yr. greater than that for Group B. Likewise, *Ss* in Group A had a higher median educational level and higher median GCT scores. These differences are all significant ($t_{\text{educ.}} = 9.08$, $t_{\text{age}} = 6.08$, $t_{\text{GCT}} = 8.64$; $ps = < .01$). Thus, *Ss* having the most adequate psychosocial adjustment

TABLE 1

MEDIAN AGE, EDUCATION, AND GENERAL CLASSIFICATION TEST SCORES

	Age	Education	GCT
Group A	19.6	12.1	61.6
Group B	17.0	10.0	46.8

in the recruit training situation are, as a group, older, better educated, and show a higher intellectual potential. The implications of this difference will be discussed later.

RESULTS

The distribution of scores on the EIS for the two groups is shown in Table 2. This table also includes a distribution of responses on the ACL.

TABLE 2

TOTAL SCORES FOR EACH GROUP ON THE TWO INSTRUMENTS

Group	*N*	Total Scores on the Ego Identity Instrument*									
		Mdn	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66–70
A	56	58.27	2	0	3	2	7	11	37	27	11
B	51	48.90	0	14	8	18	20	21	14	6	0
Group	*N*	Total Scores on the Self-concept Instrument*									
		Mdn	0–10	11–20	21–30	31–40	41–50	51–60	61–70	71–80	
A	56	52.27	2	0	0	16	25	34	21	2	
B	51	39.10	0	6	18	30	22	18	4	2	

*Because the two groups contain an unequal number of *Ss*, scores for these tables are tabulated in terms of percentages.

The first hypothesis states that individuals who demonstrate differences in their ability to effect an adequate psychosocial adjustment also will show differences in ego identity, differences being in the nature of greater ego identity in those individuals with a more adequate psychosocial adjustment. The total scores for the first five psychosocial crisis stages of the EIS were used as an operational measure of ego identity in testing this hypothesis. The median score in the EIS for Group A was 48.50, and that for Group B was 40.38. A Mann-Whitney *U* test (Siegel, 1956) corrected for ties yielded a *z* score of 5.64 ($p < .01$). Accordingly, this hypothesis is supported.

The second hypothesis stated that individuals presenting evidence of adequate ego identity also will show a significantly greater advance in the solution of the psychosocial crisis of early adulthood than will persons manifesting evidence of ego diffusion. Because the scores of Group A were uniformly higher than those of Group B on all six crisis stages, a transformation of the data was indicated before testing this hypothesis. Thus, a median score on the first five crisis

stages of the EIS was computed for each *S*. A tabulation then was made of the number of *S*s in each group with scores in the sixth crisis stage which exceeded the median of their scores on the first five stages. The results of this transformation are as follows:

	Group A	Group B
N above median	26	30
N below median	30	31

Assuming the null hypothesis, an equal number of *S*s in each group would be expected to score above and below the median of their scores on the first five stages. The significance of the difference between the transformed scores on the sixth stage of the two groups was evaluated by means of χ^2. The obtained χ^2 of .310 does not reach the 5% level of significance. Accordingly, it is concluded that the second hypothesis is not supported by the data.

The third hypothesis stated that persons presenting evidence of satisfactory ego identity will demonstrate a greater degree of self-acceptance than will individuals presenting evidence of ego diffusion. In testing this hypothesis, Gough's ACL was used as the operational measure of self-acceptance. The scores of Group A, which meets the operational definition of satisfactory ego identity, were evaluated against those of Group B, which operationally presents evidence of ego diffusion. Median scores for Groups A and B were 52.27 and 39.10, respectively. The significance of the difference between the scores was determined by use of the Mann-Whitney *U* test, which yielded a *z* of 4.46 ($p < .01$). As a next step, the scores on the EIS and the ACL for each of the groups were correlated. A Pearson *r* of .69 was obtained for Group A, and an *r* of .43 for Group B (both $p < .01$). These data are considered to support the hypothesis.

Further Results

Throughout Erikson's writing there is an implication that individuals manifesting evidence of ego diffusion will show a disturbance in the first psychosocial crisis stage. Although an hypothesis was not formulated to investigate this aspect of the theory at the time the investigation was undertaken, the data shed some light on the matter. The scores on the six crisis stages were intercorrelated for each group of *S*s, yielding the matrices set forth in Table 3. As will be noted in the matrix for Group A, Stages II through VI show a relatively low and nonsignificant correlation with Stage I. Except for Stage VI, there is a definite pattern to the intercorrelations for this group. The influence of a preceding crisis stage on a given stage is inversely proportional to the distance it is removed from the stage in question. However, this pattern does not hold uniformly for the effect of any given stage on the succeeding stages.

A different situation is found for Group B. The correlation between the

TABLE 3

CORRELATION COEFFICIENTS CRISIS STAGES I TO VI

	I Infancy	II Early Childhood	III Play Age	IV School Age	V Adoles-cence	VI Early Adulthood
			Group A			
I		.2318	.1821	.2220	.1929	.2315
II			.2112	.2811**	.2930**	.2243
III				.4547*	.3445*	.4259*
IV					.3927*	.2887**
V						.3273**
			Group B			
I		.1570	.2898**	.5253*	.3790*	.4348*
II			.4307*	.2408	.5036*	.2484
III				2908**	.5198*	.6015*
IV					.4629*	.1979
V						.4017*

*$p = .01$. **$p = .05$.

first and each succeeding crisis stage is significant in four out of five of the stages. Moreover, intercorrelations for the ego diffusion group tend to be much higher than for the ego identity group. On the basis of these matrices, it appears that Erikson's empirical observations with regard to the strong relationship between the basic trust-mistrust conflict and ego diffusion are supported by the present investigation.

DISCUSSION

It is considered that the results of this investigation lend support both to the value of Erikson's theory in the systematic study of personality and to his position that an adequate ego identity is necessary for a person to cope effectively with his social and cultural environment. The negative finding for the second hypothesis, that pertaining to predicted differences between the two groups in resolution of the psychosocial crisis following ego identity, does not necessarily detract from this conclusion. The result on this secondary hypothesis is subject to several alternative explanations. The finding obviously may reflect an inadequacy of the theory; however, such an interpretation must be accepted with reservations in view of the highly positive findings in the remainder of the study. Secondly, consider the ages of *Ss* used in the study. It would be consistent with the theory that even the group demonstrating highly effective psychosocial adjustment had not yet fully resolved the psychosocial crisis of young adulthood. Finally, and equally as possible, the rather crude instrument used as an operational measure of ego identity in this study was not sufficiently sensitive to measure differences in a single psychosocial crisis stage.

The results of this study hold a number of implications for the construct or

nomological validity of Erikson's theory. In order to establish the nomological net which Cronbach and Meehl (1955) use as a philosophical basis for construct validity (or nomological validity, Campbell, 1960), it is necessary to show evidence both of convergent and discriminant validity of ego identity as a concept. In the present study, discriminant validity of the concept is seen in the fact that *Ss* meeting two different criteria of psychosocial adjustment are distinguished in a predicted manner on the basis of an operational measure of ego identity. Evidence of convergent validity was obtained from the test of the third hypothesis. On the basis of Erikson's theory, individuals who differ on an operational measure of ego identity also should differ in the same fashion on an operational measure of self-acceptance, which is one aspect of the self-concept. Further, there is a predictable positive relationship between the measures of ego identity and self-acceptance.

An additional contribution to the nomological validation of the theory is found in the correlation matrices contained in Table 3. Because of the small number of *Ss* involved and the lack of replication, as well as the gross nature of the experimental instrument, the inferences drawn from these matrices must of necessity be considered as suggestive rather than conclusive. The foregoing notwithstanding, it is extremely interesting to note that there appears to be a systematic relationship between the various crisis stages as would be predicted on the basis of Erikson's theory.

In Group A, Crisis Stage I on the EIS showed no significant correlation with the remaining five stages. Each stage seemingly makes an independent contribution to the total ego identity score relatively independently of the first crisis stage. On the other hand, those stages of psychosocial development which are concerned with the expanded social radius found in role playing, school, and competitive endeavors show a positive relationship. The strength of this relationship increases proportionally to the increasing complexity of interpersonal demands which are made upon the individual.

The matrix for Group B is markedly different. With a single exception, Crisis Stage I is significantly related to the other five stages. This finding is consistent with Erikson's contention that individuals manifesting evidence of ego diffusion will present evidence of an unsatisfactory resolution of the first psychosocial crisis. The remaining correlations in the Group B matrix are so erratic that specific inferences are unwarranted.

Age, education, and intelligence intentionally were not controlled in the selection of *Ss*, as these variables theoretically should be reflected in ego identity. This assumption was supported. *Ss* who demonstrated highly adequate psychosocial adjustment on the criterion measure not only showed significantly higher scores on the operational measure of ego identity, but they also were older and a superior group in terms of education and GCT scores, as shown in Table 1.

Resolution of the ego identity crisis is postulated as occurring during late

adolescence. However, it is clear that age is not the sole determining factor in this study, either of psychosocial adjustment or of response on the EIS. Age and EIS score within the two groups of *Ss* form no particular pattern and show a non-significant correlation ($r = .04$).

REFERENCES

BRONSON, G. W. Identity diffusion in late adolescents. *J. abnorm. soc. Psychol.*, 1959, 59, 414-417.

CAMERON, N., & MAGARET, A. *Behavior pathology.* Boston: Houghton Mifflin, 1951.

CAMPBELL, D. T. Recommendations for APA test standards regarding construct, trait, or discriminant validity. *Amer. Psychologist*, 1960, 15, 546-553.

CRONBACH, L. J., & MEEHL, P. E. Construct validity in psychological tests. *Psychol. Bull.*, 1955, 52, 281-302.

ERIKSON, E. H. Ego development and historical change. In Eissler, R., *et al.* (Eds.), *The psychoanalytic study of the child.* Vol. II. New York: International Univer. Press, 1946. Pp. 359-395.

ERIKSON, E. H. *Childhood and society.* New York: Norton, 1950. (a)

ERIKSON, E. H. Growth and crises of the healthy personality. In M. J. E. Senn (Ed.), *Symposium on the healthy personality.* New York: Josiah Macy, Jr. Found., 1950. Pp. 91-146. (b)

ERIKSON, E. H. The problem of ego identity. *J. Amer. Psychoanal. Assn*, 1956, 4, 56-122.

ERIKSON, E. H. Identity and the life cycle. *Psychol. Issues*, 1959, 1, No. 1.

GOUGH, H. *Predicting success in graduate training, a progress report.* Berkeley: Univer. of Calif., Institute of Personality Assessment and Research, 1950. (Mimeographed)

GRUEN, W. Rejection of false information about oneself as an indication of ego identity. *J. consult. Psychol.*, 1960, 24, 231-233.

GUILFORD, J. P. *Fundamental statistics in psychology and education.* (2nd ed.) New York: McGraw-Hill, 1950.

MEAD, G. H. *Mind, self, and society.* Chicago: Univer. of Chicago Press, 1934.

MURPHY, G. *Personality: a biosocial approach to origins and structure.* New York: Harper, 1947.

RIGBY, M. K., & OSSORIO, E. D. *Sociometric status and attitude characteristics of successful and unsuccessful WAVE recruits.* O.N.R. Contract, NR 151200, Tech. Rep. No. 11, 1959.

SIEGEL, S. *Nonparametric statistics.* New York: McGraw-Hill, 1956.

SULLIVAN, H. S. *The interpersonal theory of psychiatry.* New York: Norton, 1953.

WILKINS, W. L., RIGBY, M. K., & OSSORIO, E. D. *The application of sociometric technique to women recruits: II. Analysis of individual and group characteristics.* O.N.R. Contract, N7onr-40802 (NR 151-092), Tech. Rep. No. 9, 1958.

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